

Rec'd PCT/GB 30 SEP 2001

10510016

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/01426A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E21B27/00 E21B37/02 E21B29/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|---|-----------------------|
| Y | GB 2 295 838 A (NORSKE STATS OLJESELSKAP) 12 June 1996 (1996-06-12) claims 1-3; figures 2,3,5 | 1,4-6,9, 11,12 |
| Y | WO 92 19838 A (PECO MACHINE SHOP & INSPECTION) 12 November 1992 (1992-11-12) claim 1; figures 1,2 | 1,4-6,9, 11,12 |
| A | US 6 276 452 B1 (CASSEL TERRY EDGAR ET AL) 21 August 2001 (2001-08-21) claim 1; figures 1,2 | 1,11 |
| A | US 4 515 212 A (KRUGH MICHAEL E) 7 May 1985 (1985-05-07) cited in the application See abstract figure 1 | 1,11 |
| | | -/- |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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Date of the actual completion of the International search

24 July 2003

Date of mailing of the International search report

01/08/2003

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| C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|---|---|-----------------------|
| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | US 6 176 311 B1 (RYAN JIMMY DON) 23 January 2001 (2001-01-23) cited in the application See abstract figure 1 | 1,11 |
| A | WO 00 58602 A (FRENCH CLIVE JOHN ;FRENCH OILFIELD SERVICES LTD (BE)) 5 October 2000 (2000-10-05) claims 1,3; figures 1,9 | 1,11 |

INTERNATIONAL SEARCH REPORT

Invention on patent family members

International Application No

PCT/GB 03/01426

| Patent document cited in search report | | Publication date | | Patent family member(s) | | Publication date |
|--|----|------------------|----------------------------|--|--|--|
| GB 2295838 | A | 12-06-1996 | NO US | 944539 A 5682950 A | | 28-05-1996 04-11-1997 |
| WO 9219838 | A | 12-11-1992 | WO GB | 9219838 A1 2271591 A | | 12-11-1992 20-04-1994 |
| US 6276452 | B1 | 21-08-2001 | AU GB NO | 1850199 A 2335218 A 991155 A | | 23-09-1999 15-09-1999 11-09-2000 |
| US 4515212 | A | 07-05-1985 | US | 4603739 A | | 05-08-1986 |
| US 6176311 | B1 | 23-01-2001 | AU AU GB NO WO | 752943 B2 1282399 A 2336614 A ,B 993175 A 9922112 A1 | | 03-10-2002 17-05-1999 27-10-1999 25-08-1999 06-05-1999 |
| WO 0058602 | A | 05-10-2000 | AU EP WO | 3974400 A 1165935 A1 0058602 A1 | | 16-10-2000 02-01-2002 05-10-2000 |